

However, a review of the specification reveals that the claimed method prepares the disks for transport by providing a cushioning layer of powder, and prepares the disks for easy separation from a stack of disks through the use of the layer of powder. Since these two goals do not necessarily overlap, and since Applicants did not wish to limit the claims to a method that achieves only these stated goals, claim 10 had been drafted in a manner that was believed to comply with all official provisions, while reading upon a method that would prepare a disk for different uses. Nevertheless, in order to facilitate the prosecution of the application, Applicants have eliminated all functional language from the preamble of claim 10, so that this claim is now directed only to a method, having the included method operations recited in the body of the claim. It is noted that the method claims recite all of the structural features needed to implement the claimed method. It is further noted that the claims would enable one skilled in the art, to whom the present application is directed, to make and/or use the invention. It is thus requested that this rejection be withdrawn.

The Examiner's Action had rejected claims 2-8 as being indefinite. In response thereto, claim 2 has been amended to eliminate the alternative expression that the Examiner's Action had found offensive. It is submitted that the claims comply with all official provisions, and it is requested that this rejection be withdrawn.

The Examiner's Action has rejected claims 1-20 as being obvious in view of *Tolles et al.* (USP 5,738,574). It is submitted that these claims are patentably distinguishable over the cited reference for at least the following reasons.

Applicants' independent claim 1 is directed to a first and a second stacked disk, and a powder disposed between the disks. As revealed by Applicants' specification,

prior to Applicants' claimed invention, it was conventional to transport stacked disks using a piece of paper between adjacent disks. The paper would prevent the surface of one disk from scratching the surface of an adjacent disk, and would facilitate separation of the disks from the stack. However, the use of such paper is problematic to the end user. For example, some of the paper would invariably end up in undesired locations, such as being caught in the workings of an expensive piece of manufacturing equipment causing possible equipment damage and loss of thru-put, or as debris on the floor (see page 3, line 3 through page 4, line 7). Applicants' claimed invention overcomes these and other problems by providing a powder between the adjacent disks. In particular, the claimed powder serves as a cushion between the disks, so that the disks will not damage one another. Moreover, the powder may absorb impacts to the stack caused by improper handling, thus protecting the disks from breakage. Further, the use of the powder will prevent close forces of attraction such as polarization and coulombic forces from holding the disks together, thus facilitating the separation of the disks from the stack of disks (see page 9, lines 17-22). Neither Applicants' claimed invention, nor the problems sought to be solved by Applicants' claimed invention, nor the advantages associated with Applicants' claimed invention, are disclosed or suggested by the cited reference.

*Tolles et al.* disclose a system for chemical mechanical polishing. The system includes a polishing apparatus 20 and a wafer loading apparatus 30. Wafers 40 stored in cassettes 42 are disposed in a tub 34, which is filled with a liquid bath, such as deionized water, for keeping the wafers wet. The wafers 40 are individually loaded from

a respective cassette 42 and into the wafer polishing apparatus 20 (see column 12, lines 42-48 and column 14, lines 26-32).

This reference also discloses that the wafers 40 are held in an upright position, and separated from one another, in the cassette 42 using slot ridges 430. The slot ridges 430 are disposed at a base and sides of the cassette (see column 64, lines 31-33, column 65, lines 58-63, column 66, lines 64-66, column 68, lines 53-60, and Figures 67 and 71A-71C).

Further, this reference discloses that the liquid bath is used to prevent any adhering slurry from hardening on the wafer 40, and to prevent a fresh metal surface of the wafer from oxidizing in the air (see column 66, lines 1-4).

The Examiner's Action has stated that the liquid bath disclosed by the cited reference spaces apart the disks, and is used as a separation aid. However, a careful reading of this patent, will reveal that the liquid bath does not space apart the disks, nor does it serve as a separation aid as alleged by the Examiner's Action. Instead, the wafers 40 are spaced apart from each other using the slot ridges 430. Moreover, there is no disclosure or suggestion from this reference that the liquid bath serves as a separation aid. In fact, it is respectfully submitted that the liquid bath would hinder the separation of the wafers. That is, the liquid would inherently cling to the adjacent wafers, and its viscosity would inherently require the application of a shearing force to separate the wafers. Moreover, were it not for the slot ridges 430, the liquid between the wafers would cause the wafers to cling to each other. That is, as is well known to those skilled in the art, if a fluid is disposed between two adjacent flat wafers, any air between the wafers will be displaced, causing the atmospheric pressure to force the

wafers together. This is easily demonstratable by placing a few drops of water on a specimen glass slide, and placing another glass slide thereupon. The two glass slides will now be difficult to separate

Thus, not only does this reference not disclose using a fluid as a separation aid, but this reference inherently teaches away from such an arrangement.

Further, the Examiner's Action acknowledges that *Tolles et al.* do not disclose a powder between the disks, but relies upon certain case law for the proposition that it is within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

However, a review of the primary case (*In re Leshin*, 125 USPQ 416) relied upon by the Examiner's Action reveals that this case does not stand for the broad proposition that replacing a powder with a liquid would be obvious. Instead, this case involved a container, in which the molded plastic of a prior art container was replaced with another known plastic. The alleged invention was the selection of the plastic for a particular purpose. The Court held that this was not inventive. In contrast, the prior art relied upon by the Examiner does not disclose a powder, but a completely different substance (i.e., a liquid), so that Applicants are not simply replacing one known powder for another known powder. As such, the holding from *In re Leshin* is inapplicable.

Moreover, The Federal Circuit has specifically stated that cases that state such *per se* rules should not be applied in rejecting the claims of a patent application. In particular, the court decisions cited in the Action hark back to a time when the presence or absence of "invention" was used as the basic test for patentability, and so-called "negative rules of invention" were developed as an aid to determine when "invention"

was present. These negative rules of invention sometimes let to reasonable results but they were also frequently applied in a mechanical way (such as in the present case) to deny patent protection for meritorious inventions. This is one reason why Congress switched away from the "invention" test to the current "non-obviousness" test for patentability. It took awhile for the courts to wean themselves away from the negative rules of invention, but the negative rules are now thoroughly discredited as tests for patentability. Graham v. John Deere, 148 USPQ 459 (S. Ct., 1966) makes it quite clear that non-obviousness, not the presence or absence of "invention," is the basic test for patentability.

Moreover, in its decision in In re Ochia, 37 USPQ2d 1127 (1995), the Court of Appeal for the Federal Circuit stated (at page 1133):

The use of *per se* rules, while undoubtedly less laborious than a searching comparison of the claimed invention – including all of its limitation – with the teachings of the prior art, flouts section 103, and the fundamental case law applying it. *Per se* rules that eliminate the need for fact-specific analysis of claims and prior art may be administratively convenient for PTO examiners and the Board. Indeed, they have been sanctioned by the Board as well. But reliance on *per se* rules of obviousness is legally incorrect and must cease. Any such administrative convenience is simply inconsistent with section 103, which, according to Graham and its progeny, entitles an applicant to issuance of an otherwise proper patent unless the PTO establishes that the invention as *claimed* in the application is obvious over cited prior art, based on the specific comparison of that prior art with claim limitations. We once again hold today that our precedents do not establish any *per se* rules of obviousness, just as those precedents themselves expressly declined to create such rules. Any conflicts as may be perceived to exist derive from an impermissible effort to extract *per se* rules from decisions that disavow precisely such extraction.

It is respectfully submitted that the position taken by the Examiner's Action, and its reliance on court decisions in an apparent effort to avoid performing a complete

search and to avoid explaining **why** an ordinarily skilled person would have had an incentive to modify the prior art so as to achieve the present invention, run contrary to the above-quoted guidelines of the CAFC.

As such, since the prior art does not disclose or suggest a powder between a stacked first and second disk, it is respectfully submitted that the Examiner's Action has not established a *prima facie* case of obviousness against claim 1. As such, it is requested that this claim be allowed.

Moreover, dependent claims 2-8 are submitted to be patentably distinguishable over the cited reference for at least the same reasons as independent claim 1, from which these claims depend, as well as for the additional features recited therein. As such, it is requested that these claims be allowed.

Moreover, dependent claim 3 is submitted to be further patentably distinguishable over the cited reference for at least the following additional reason. In particular, claim 3 recites that the powder spaces the first disk from the second disk. Although the Examiner's Action states that the cited reference discloses a liquid bath that spaces apart the disks, as discussed above a careful reading of this cited patent reveals that the wafers 40 are separated from one another in the cassette 42 using slot ridges 430. There is no disclosure or suggestion that the liquid bath has anything to do with the spacing of the disks. As such, it is requested that this claim be allowed.

Further, Applicants have rewritten claim 9 into independent form. This claim is submitted to be patentably distinguishable over the cited reference for the same reasons as independent claim 1, as well as for at least the following additional reason. In particular, claim 9 recites that only the powder is used to space apart the first disk

from the second disk. It is initially noted that the Examiner's Action has not addressed this claim recitation. Moreover, and in contrast, the cited patent reveals that the wafers 40 are spaced apart from one another in the cassette 42 using slot ridges 430. There is no disclosure or suggestion that only the liquid bath is used to space apart the disks. As such, it is requested that this claim be allowed.

Independent claim 10 recites a method that includes recitations similar to those found within independent claim 1. It is thus submitted that this claim is patentably distinguishable over the cited reference for similar reasons to claim 1, as given above. It is requested that this claim be allowed.

Moreover, dependent claims 11-20 are submitted to be patentably distinguishable over the cited reference for at least the same reasons as independent claim 10, from which these claims depend, as well as for the additional features recited therein. As such, it is requested that these claims be allowed.

Moreover, dependent claim 11 is submitted to be further patentably distinguishable over the cited reference for at least the following additional reason. In particular, claim 11 recites utilizing the powder to space the surface of the first disk from the surface of the second disk. As discussed above with respect to dependent claim 3, which recites similar language, a careful reading of the cited patent reveals that the wafers 40 are separated from one another in the cassette 42 using slot ridges 430. There is no disclosure or suggestion that the liquid bath has anything to do with the spacing of the disks. As such, it is requested that this claim be allowed.

Moreover, dependent claim 12 is submitted to be further patentably distinguishable over the cited reference for at least the following additional reason. In

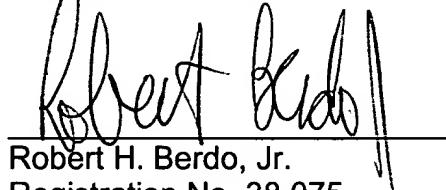
particular, claim 12 recites unstacking the disks utilizing the powder as a separation aid. As discussed above, the cited reference not only does not disclose this operation, but in fact inherently teaches away from this operation. That is, the disclosed liquid bath would hinder the separation of the wafers, and were it not for the slot ridges 430, the liquid between the wafers would cause the wafers to cling to each other. As such, it is requested that this claim be allowed.

Moreover, dependent claim 16 is submitted to be further patentably distinguishable over the cited reference for at least the following additional reason. In particular, claim 16 recites transporting the disks, and using the powder to protect the disks during transport. It is initially noted that the Examiner's Action has not addressed this claimed operation. Moreover, it is further noted that since this reference discloses the wafers are disposed vertically when in the liquid bath (see column 65, lines 55-62), when the wafers are lifted from the bath, any liquid thereon will run off. Thus, it is respectfully queried how this liquid protects the wafers during transport? It is submitted that it does not. As such, it is requested that this claim be allowed. It is further requested that these rejections be withdrawn.

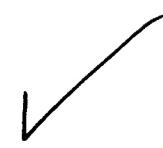
It is submitted that this application is in condition for allowance. Such action, and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Respectfully submitted,



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AMENDMENT

09/840,077

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

Please amend the claims as follows:

2. (Amended) The combination recited in claim 1, wherein said first disk and said second disk are each comprised of one of a glass [or] and glass ceramic.

9. (Amended) [The] In combination [recited in claim 1], a plurality of disks including a first disk and a second disk stacked upon said first disk, and a powder disposed between said first disk and said second disk, wherein said first disk is spaced apart from said second disk by only said powder.

10. (Amended) A method [of preparing a disk], comprising:  
providing at least a first disk and a second disk;  
stacking the first disk on the second disk; and  
providing a powder between a surface of the first disk and a surface of the second disk.